Nothing Compares
NORTH CAROLINA

NC Department of Environmental Quality Update on PFOA / PFOS / Gen X

Topics

- Gen X and PFAS
- Current Resources
- DEQ Division specifics

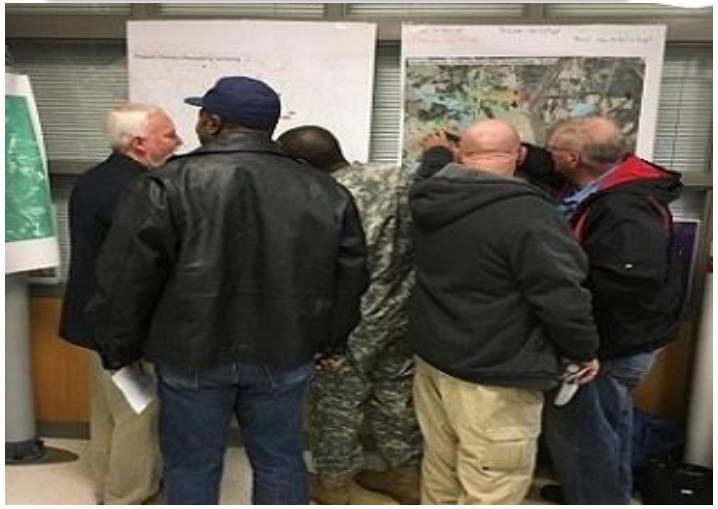
    1. Water Resources
    2. Waste Management
    3. Air Quality

- Secretaries' Scientific Advisory Board

- PFOA / PFOS

Gen X in North Carolina

- A man-made and unregulated chemical used in the manufacturing of non stick coatings and for other purposes.
- Chemours Fayetteville Facility started producing the compound in 2009 as a replacement for PFOA.
- It is also produced as a byproduct and may have been generated before 2009 at the plant.
- Initial focus in 2017 was on the Cape Fear River and public water utilities.



Recent History of the Cape Fear River data

- EPA's Third Unregulated Contaminant Monitoring Rule (UCMR) monitoring during 2013-2015 for 28 chemicals including PFOA, PFOS and 1,4-Dioxane. •
- NCSU and EPA's National Exposure Research Lab study PFOA, PFOS and other per- and poly-fluorinated chemicals in the Cape Fear River. •
- DEQ 2014-2016 study on 1,4-Dioxane, focusing on the Cape Fear River after results indicated higher concentrations than other river basins. •
- EPA NERL published a report in 2015 including the presences two compounds attributed to being byproducts of Nafion® manufacturing.
- Research findings published in Nov. 2016 on PFOA/PFOS, GenX and other related chemicals attributed to the Chemours facility.

Resources – Emerging Compounds

State Resources

- Department of Environmental Quality
  - Division of Water Resources
  - Division of Waste Management
  - Division of Air Quality
- Department of Health and Human Services

Federal Resources

- EPA

Local Resources

- County Health Departments
- Boards of Commissioners
- Public Water Utilities

Areas of Focus

- Fully assess the environmental impact of the fluorinated compounds in the environment.
- Ensure current regulatory requirements are met and evaluate future needs.
- Address the needs of the surrounding communities and serve as a conduit for the community and local partners to help them respond to concerns.
- Further the knowledge base of fluorinated compounds through collaboration with the DEQ / DHHS Scientific Advisory Board.

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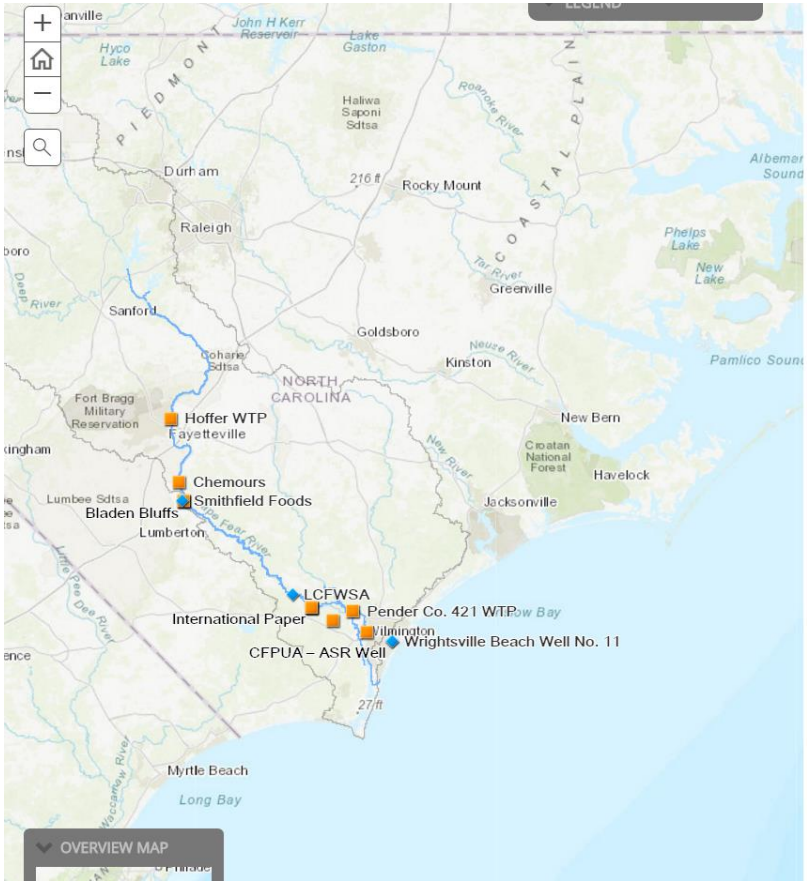
Division of Water Resources

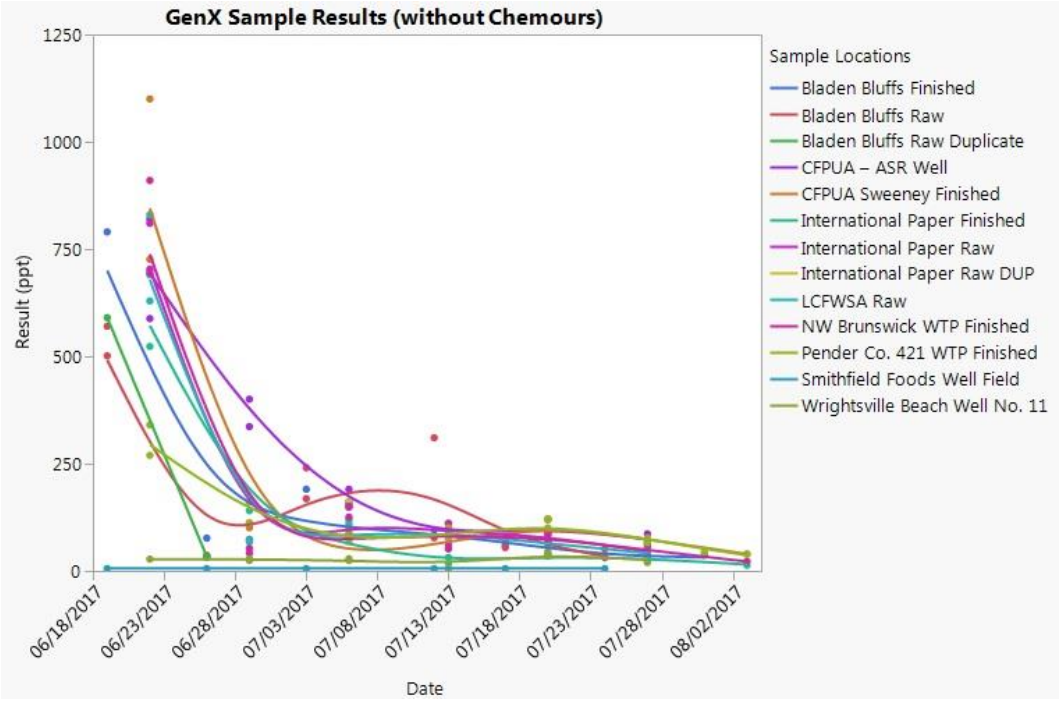
On June 19, 2017, DEQ began collecting water samples from 12 drinking water related sites along the Cape Fear River.

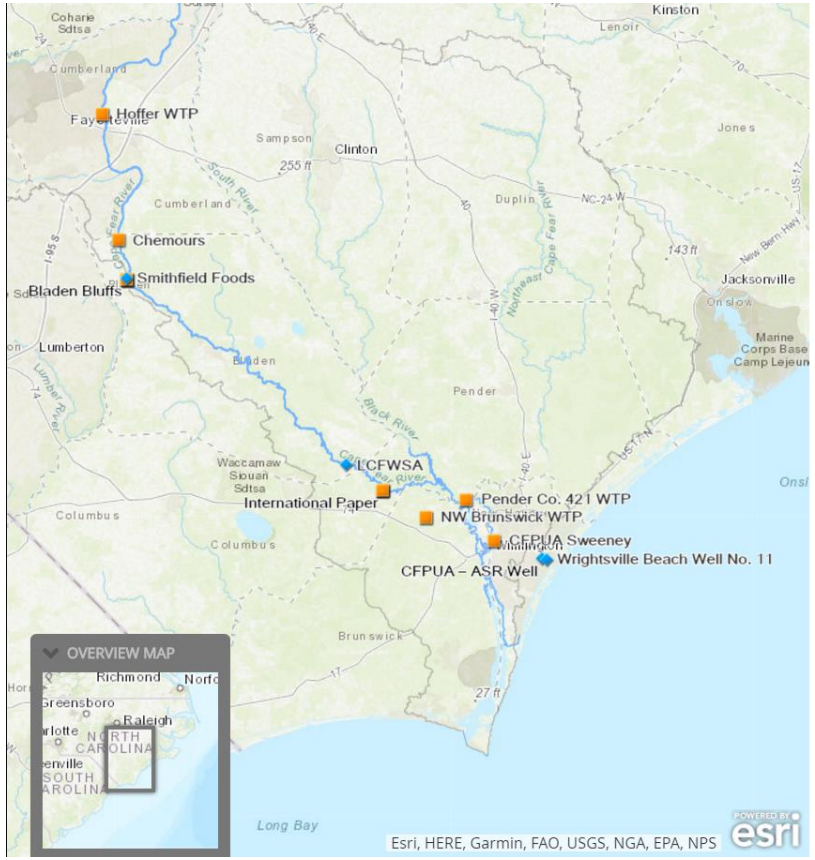
GenX was detected in all but 1 sample (a well). (Analysis by EPA and Chemours' certified independent lab)

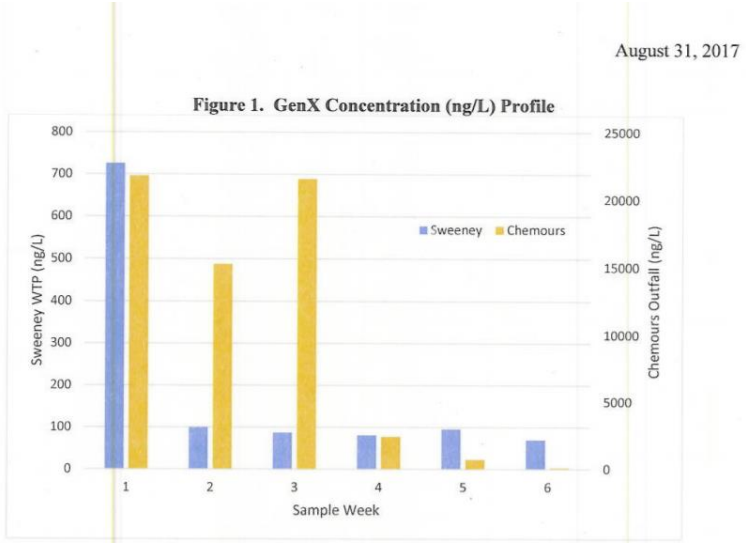
July 14, NC DHHS established the Drinking Water Health Goal for GenX of 140 ng/L (ppt)

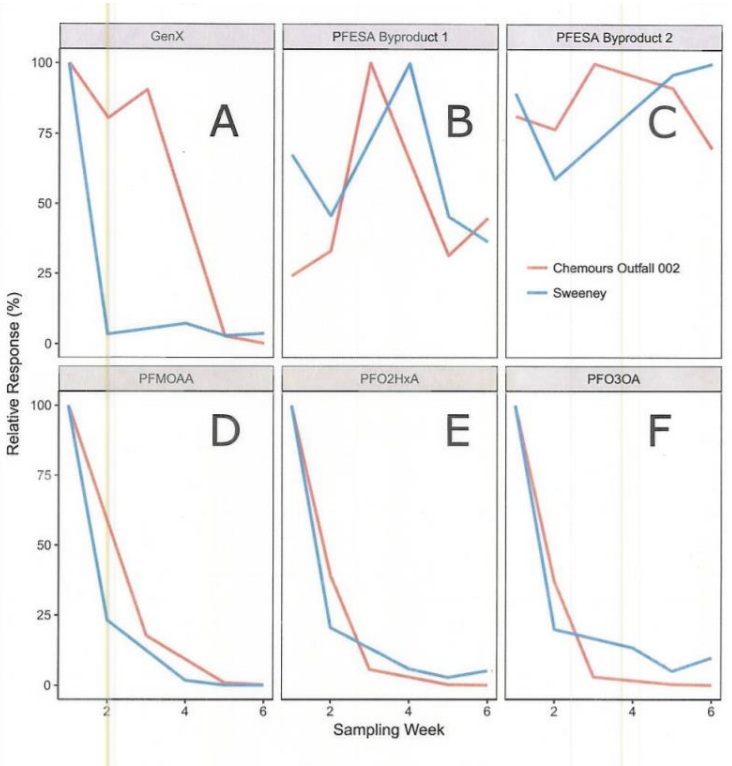


DEQ continued sampling June-Aug, 2017. Results showed ongoing decreases in GenX (below) after Chemours indicated they had stopped all GenX discharge.









GenX and most other PFAS showed significant decrease after discharge was stopped and are below health advisories/goals since.

But…

But… two new PFAS called Nafion byproducts 1 and 2 did not show a decrease after GenX discharge was stopped by Chemours, indicating possible other source.

DEQ asked the company to stop the release of these two compounds Aug 29 and repeated its call for Chemours to provide a complete inventory, sampling data and test results for all chemicals in the company's waste streams.

August 31, 2017

Figure 5. PFESA Byproduct 1 Concentration (ng/L) Profile

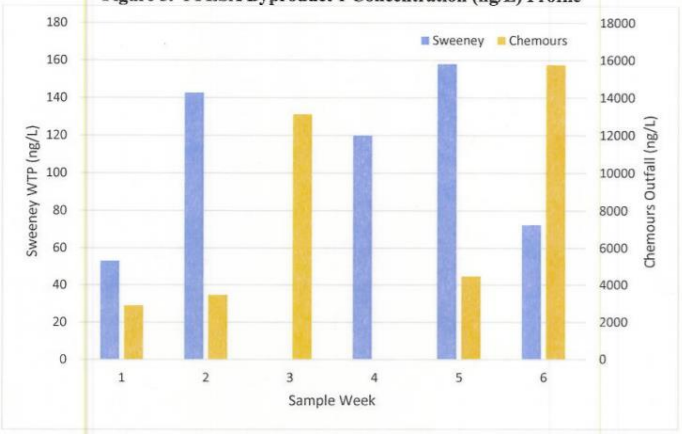
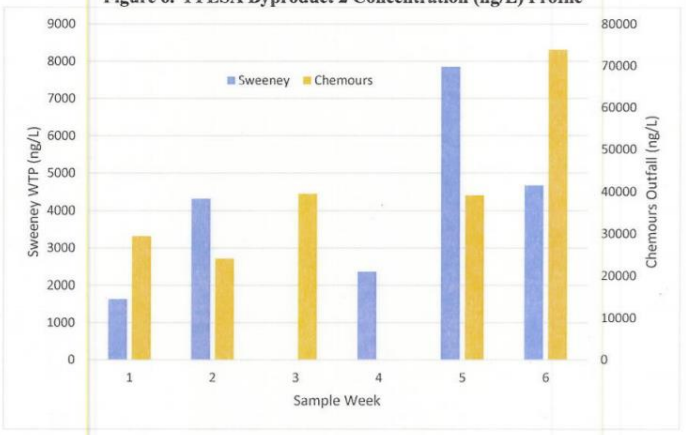


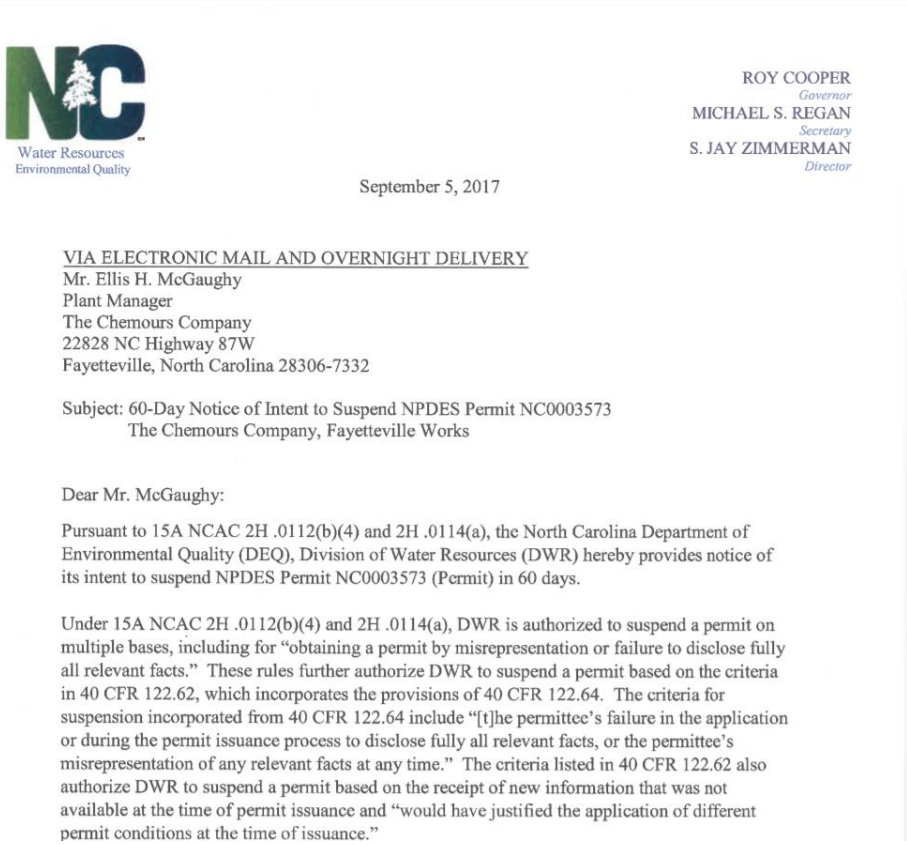
Figure 6. PFESA Byproduct 2 Concentration (ng/L) Profile



Labor Day Week:

- Letter re. notice of intent to suspend NPDES permit
- Civil court summons filed in Bladen Co. Superior Court to demand that Chemours stop its discharge of all fluorinated compounds and disclose everything in its waste stream
- NOV issued to Chemours

A partial Consent Order was reached, Sept 8.



Water Resources
Environmental Quality

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
S. JAY ZIMMERMAN
Director

September 5, 2017

VIA ELECTRONIC MAIL AND OVERNIGHT DELIVERY
Mr. Ellis H. McGaughy
Plant Manager
The Chemours Company
22828 NC Highway 87W
Fayetteville, North Carolina 28306-7332

Subject: 60-Day Notice of Intent to Suspend NPDES Permit NC0003573
The Chemours Company, Fayetteville Works

Dear Mr. McGaughy:

Pursuant to 15A NCAC 2H .0112(b)(4) and 2H .0114(a), the North Carolina Department of Environmental Quality (DEQ), Division of Water Resources (DWR) hereby provides notice of its intent to suspend NPDES Permit NC0003573 (Permit) in 60 days.

Under 15A NCAC 2H .0112(b)(4) and 2H .0114(a), DWR is authorized to suspend a permit on multiple bases, including for "obtaining a permit by misrepresentation or failure to disclose fully all relevant facts." These rules further authorize DWR to suspend a permit based on the criteria in 40 CFR 122.62, which incorporates the provisions of 40 CFR 122.64. The criteria for suspension incorporated from 40 CFR 122.64 include "[t]he permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time." The criteria listed in 40 CFR 122.62 also authorize DWR to suspend a permit based on the receipt of new information that was not available at the time of permit issuance and "would have justified the application of different permit conditions at the time of issuance."

Current Sampling

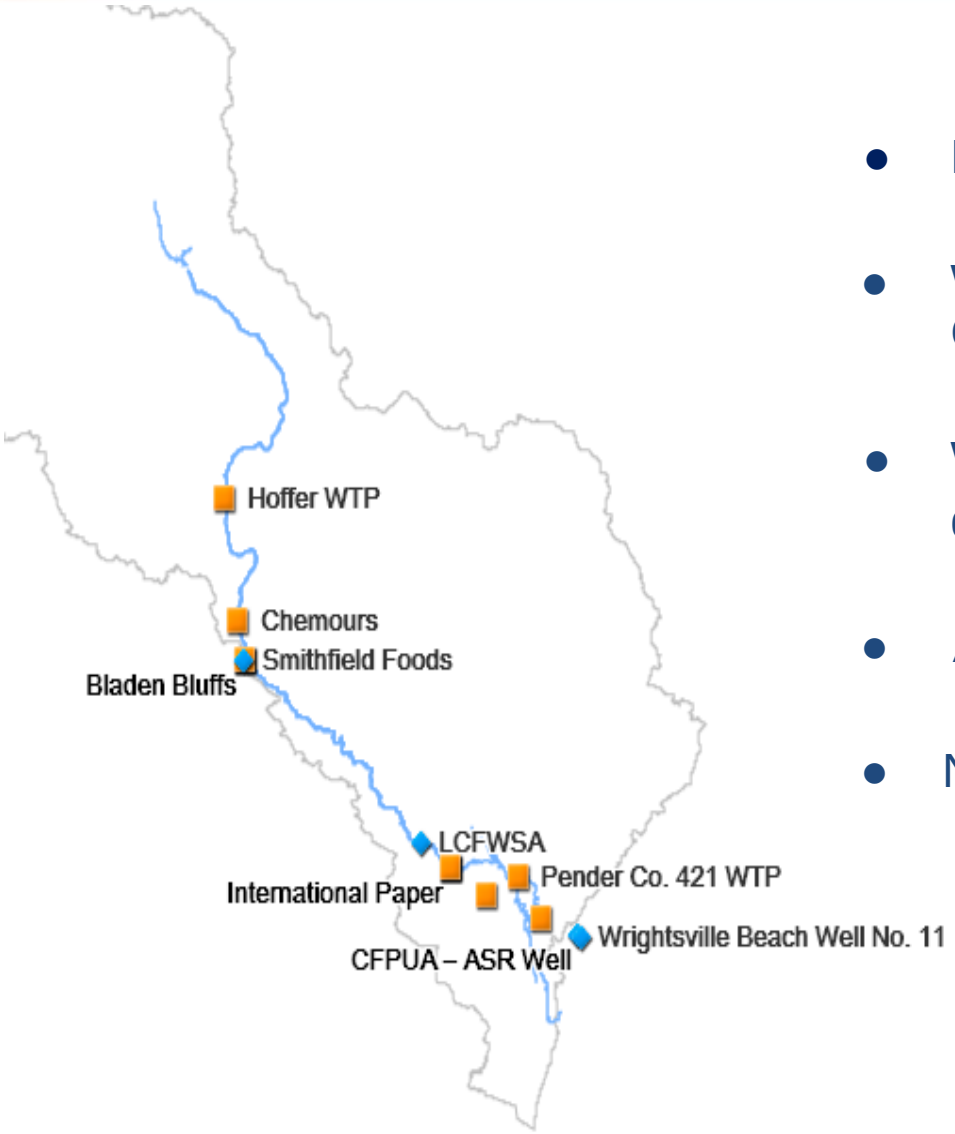
Division of Water Resources

- Two composite samples weekly at Chemours wastewater outfall into the Cape Fear River: Monday - Thursday and Friday - Sunday

- Drinking water facilities downstream are sampled weekly:
  - Bladen Bluff
  - International Paper
  - NW Brunswick
  - Pender County
  - CFPU Sweeney

- Other watersheds across North Carolina
  - Began monthly monitoring in Jordan Lake watershed Jan. 2nd

DEQ Sampling - Cape Fear River



- Process area sampling at Chemours
- Weekly composite sampling at the Chemours wastewater outfall 002
- Weekly sampling of finished drinking downstream of the Chemours facility
- Aquifer Storage Recovery Well
- Nearby Public Water Supply Wells

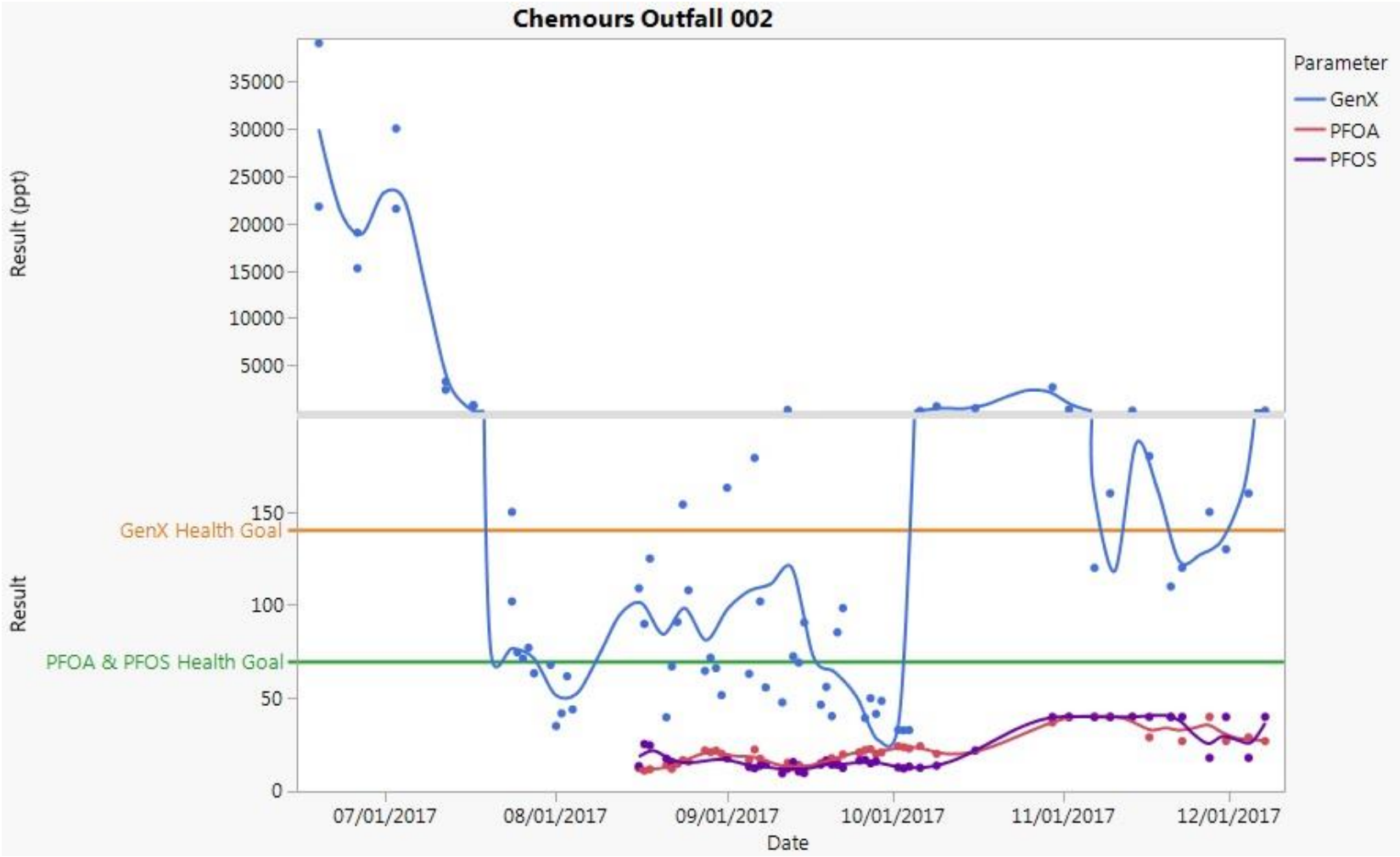
Chemicals Analyzed

- Currently analyzing for 23 Fluorinated Chemicals including GenX, PFOA and PFOS

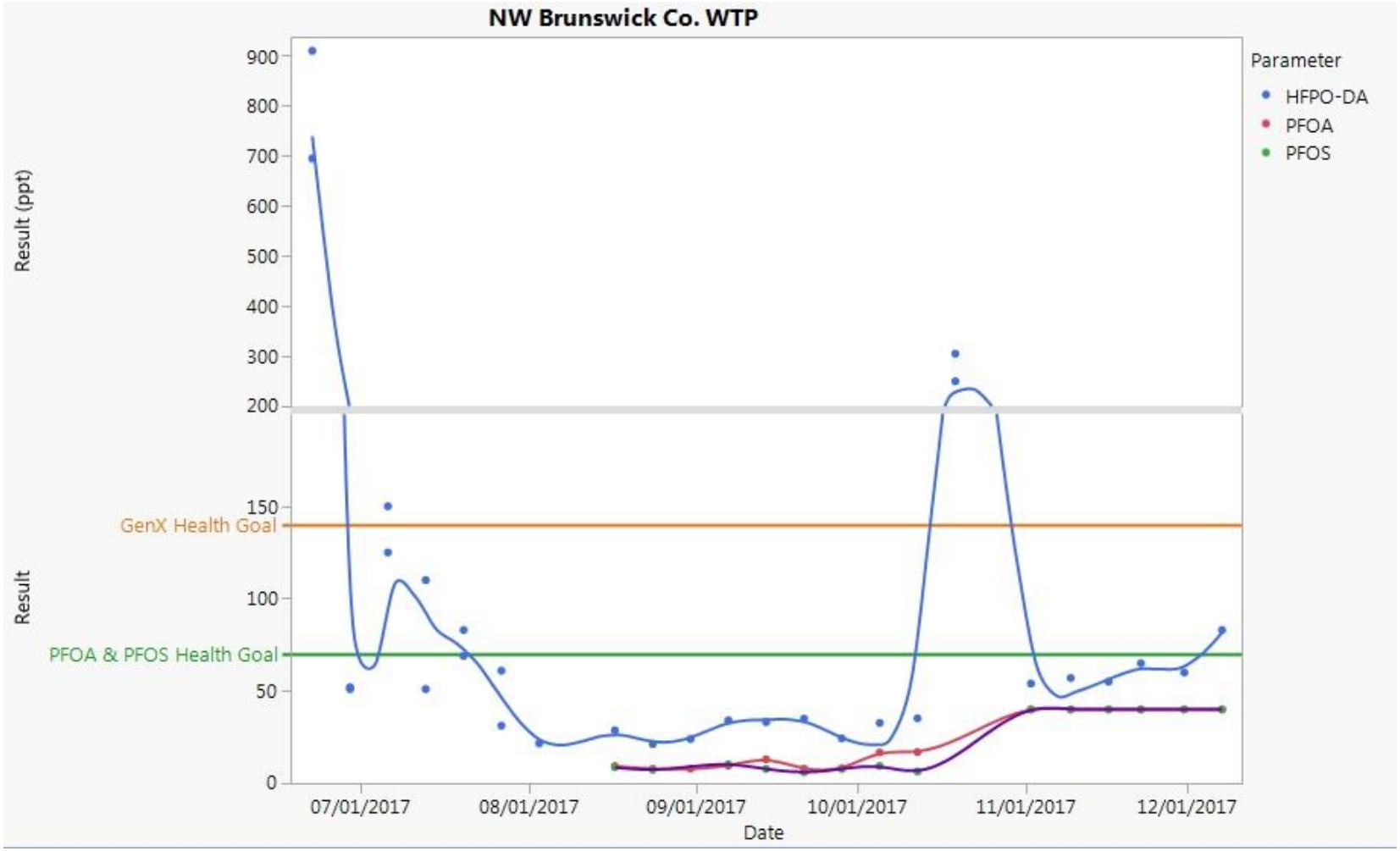
- Nafion® byproducts – analysis pending from EPA

FOSA
HFPO-DA (GenX)
N-MeFOSAA
PFBA
PFBS
PFDA
PFDoA
PFDS
PFHpA
PFHpS
PFHxA
PFHxS
PFNA
PFNS
PFOA
PFOS
PFPeA
PFPeS
PFTrDA
PFUdA
4:2FTS
6:2FTS
8:2FTS

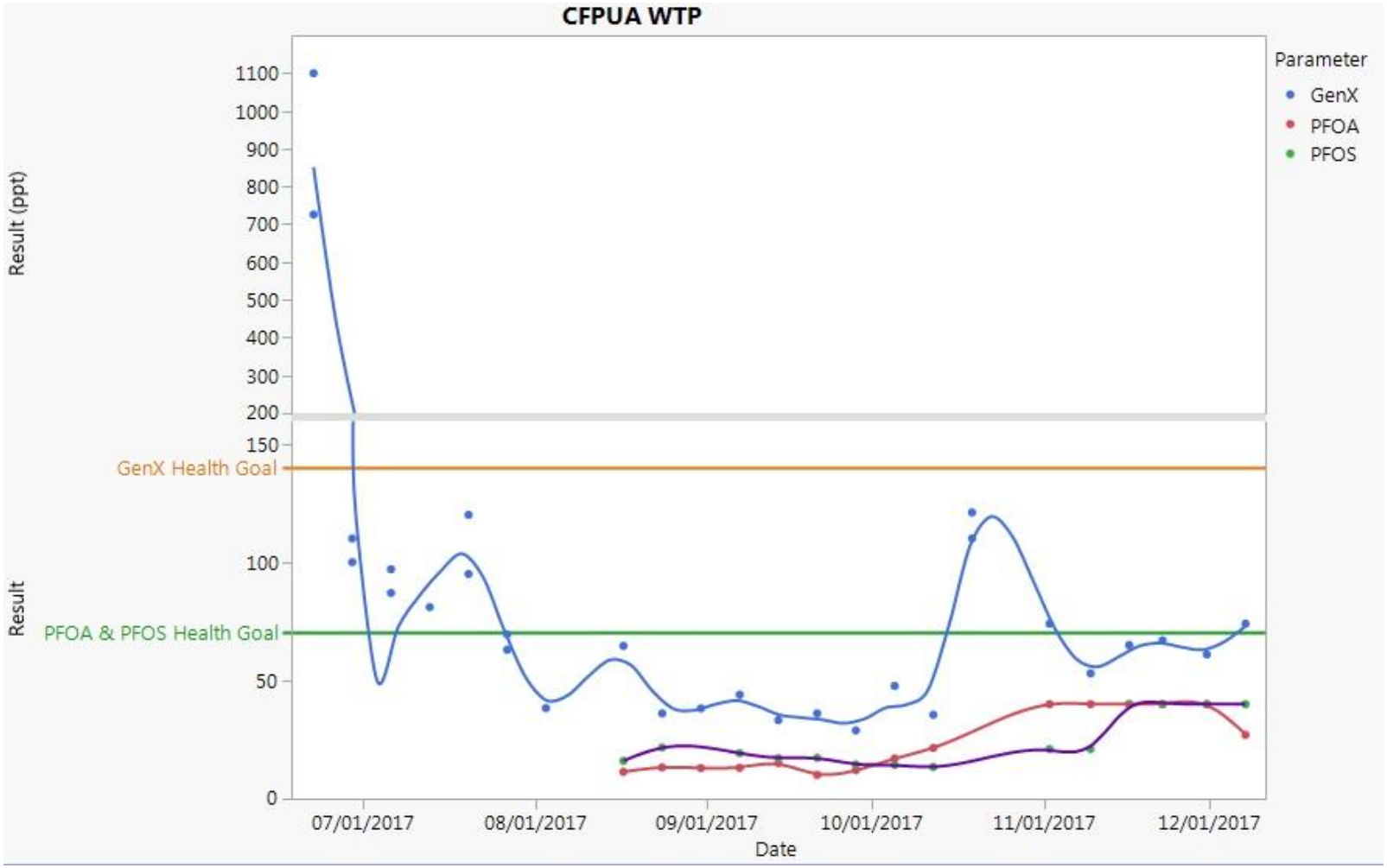
Data at Chemours Outfall 002
GenX (parts per trillion)



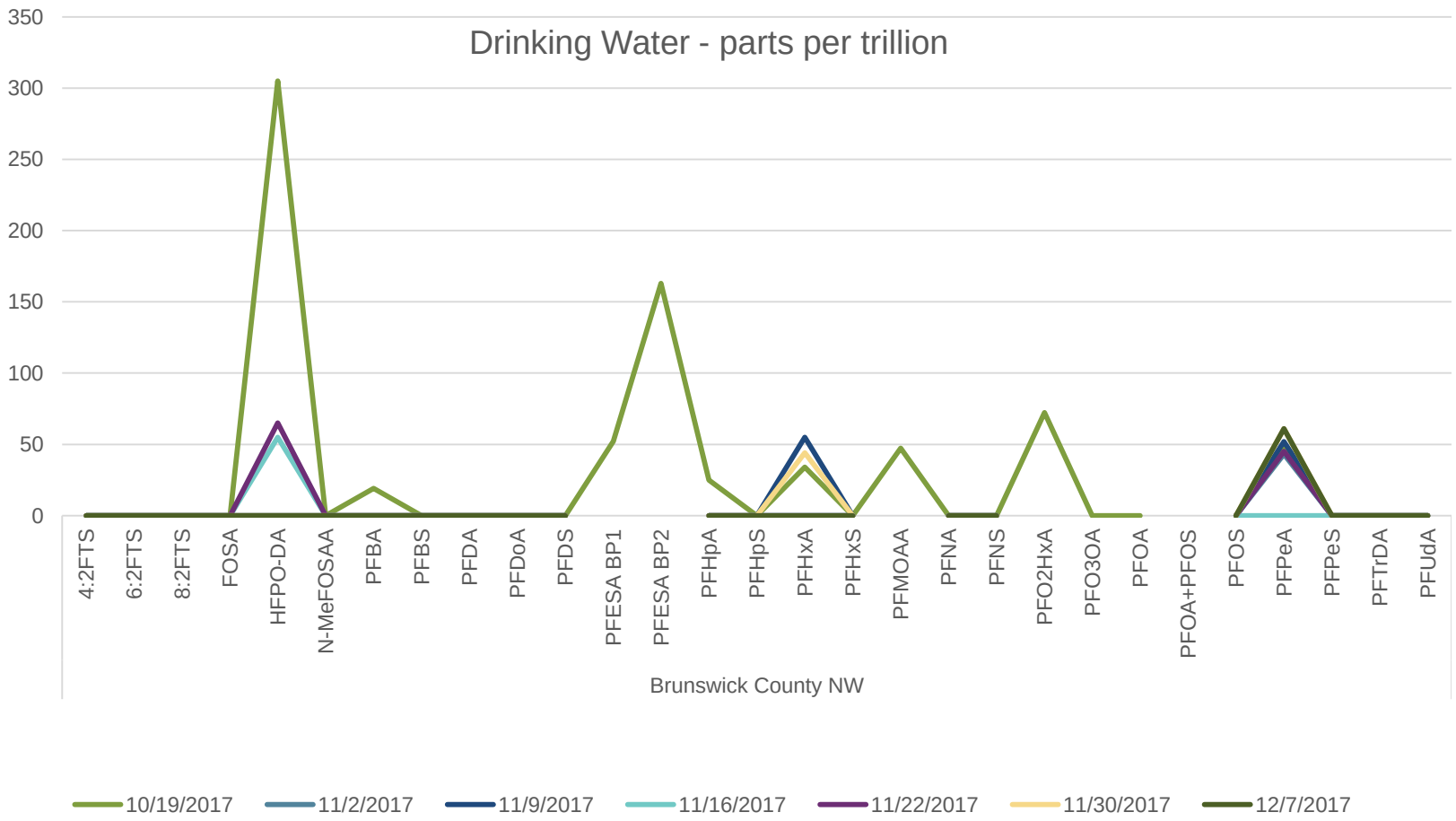
Data at Drinking Water Facilities
GenX (parts per trillion)



Data at Drinking Water Facilities
GenX (parts per trillion)



Data at Drinking Water Facilities
Fluorinated Chemicals (parts per trillion)



DWR Enforcement

- 60-day Notice of Intent to Revoke National Pollution Discharge Elimination System (NPDES) Permit (9/5/17)
- Motion for Temporary Restraining Order and Motion for Preliminary Injunctive Relief filed in Bladen County (9/7/17)
- Partial Consent Order entered with Bladen County Superior Court (9/8/17)
- Notice of Violation and Intent to Assess Civil Penalty for failure to notify of release on Oct. 6th (11/13/17)
- Notice of Partial Suspension and 60-day Notice of Intent to Partially Revoke NPDES Permit (11/16/17)

DWR Enforcement

- NOV directing Chemours to terminate or control sources of contamination and mitigate onsite hazards. (12/15/17)
- NOV ordering Chemours to immediately take new measures to control additional sources of GenX and other PFAS from site contamination and air emissions. (2/12/18)
- Letter from DEQ directing the company to begin a trial of new technology to curb emissions from the facility's smokestacks and granting limited approval for a pilot test of carbon filtration systems on residential drinking water wells. (2/12/18)
- Notice of Intent to modify air permit issued. DAQ also requires Chemours to demonstrate that air emissions at the Fayetteville Works facility can be controlled at a level that will halt contributions to groundwater violations by 4/27/18. (4/6/18)

"Chemours must show to DEQ's satisfaction that they can operate without further contamination of groundwater or we will prohibit all GenX air emissions," said DEQ Secretary Michael Regan.

Upcoming

- Resources to continue monitoring in the Cape Fear River basin and ambient monitoring for fluorinated chemicals across the state.
- Chemical analysis – continue EPA Athens lab analysis for weekly monitoring. Limitation – 5 week turnaround.
- Ambient monitoring will have to be coordinated to fit into EPA Athen's schedule, due to their support needed by other states.
- Evaluate factors for potential bioaccumulation and aquatic toxicity to develop surface water and groundwater standards, including SAB review.

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Division of Waste Management

DWM: Contamination in the river led to requested sampling of on-site groundwater

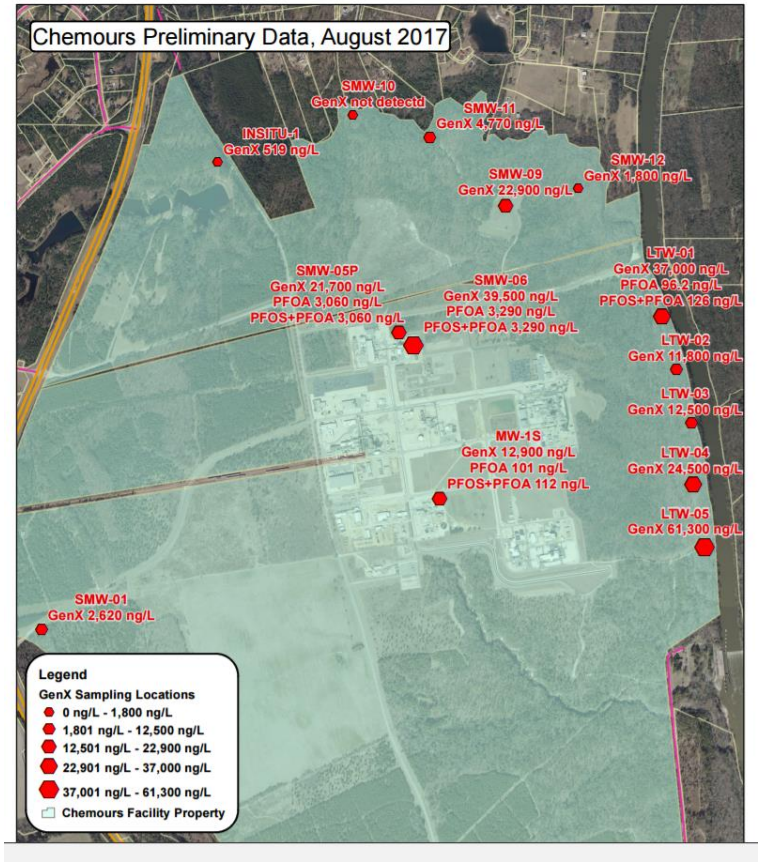
- HWS began GW sampling Chemours on-site monitoring wells, 1st week of Aug.

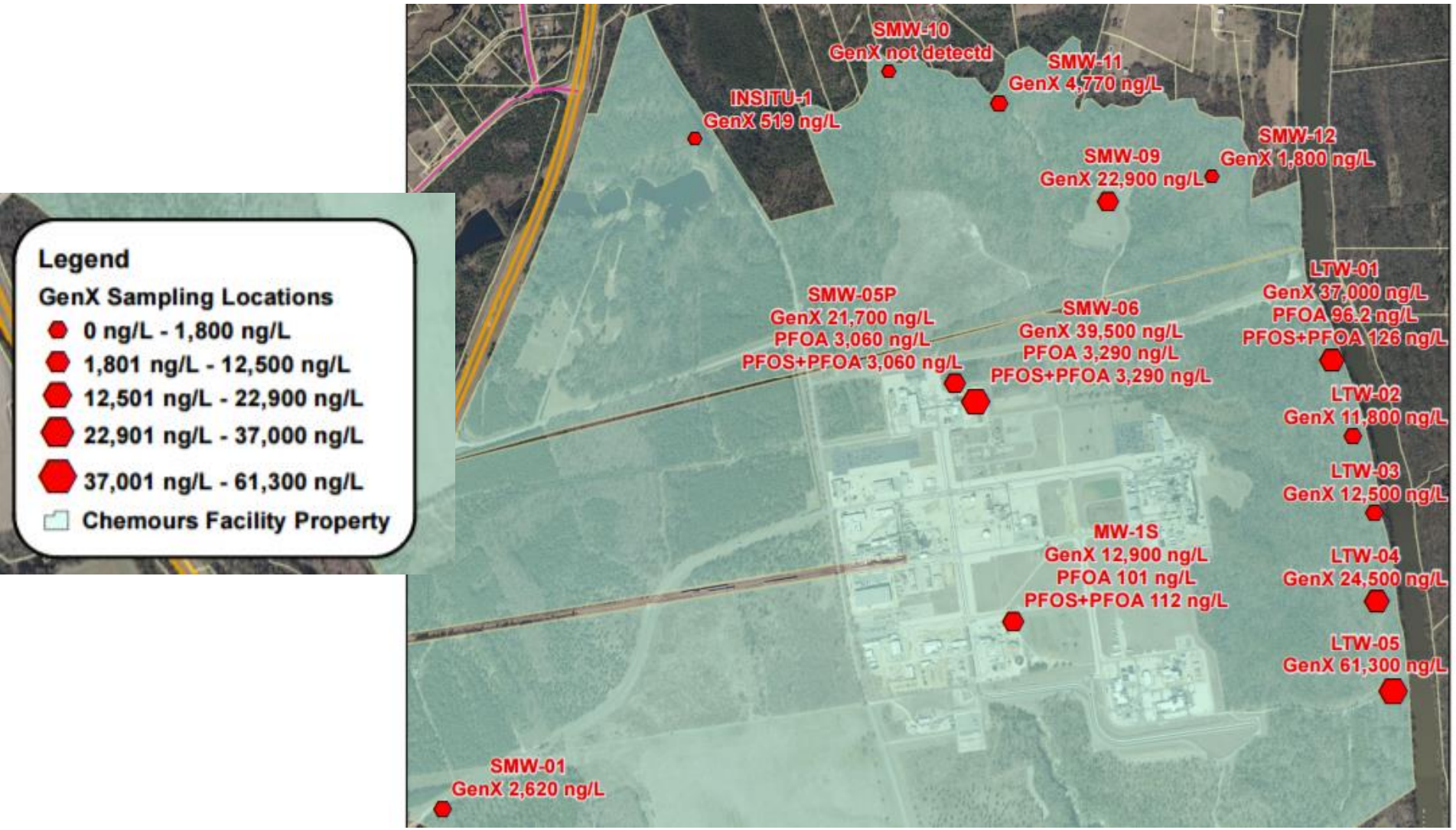
  Split samples sent to three labs: EPA NERL, Chemours' certified lab in CO, and independent lab in SC.

- Concentrations of GenX were detected in 13 of 14 industrial wells at the plant exceeding the NC health goal for GenX.

- Exceedances of EPA drinking water health advisories for PFOS, PFOA, and PFOS+PFOA found in 4 wells.

- Detections of 11 fluorinated compounds.



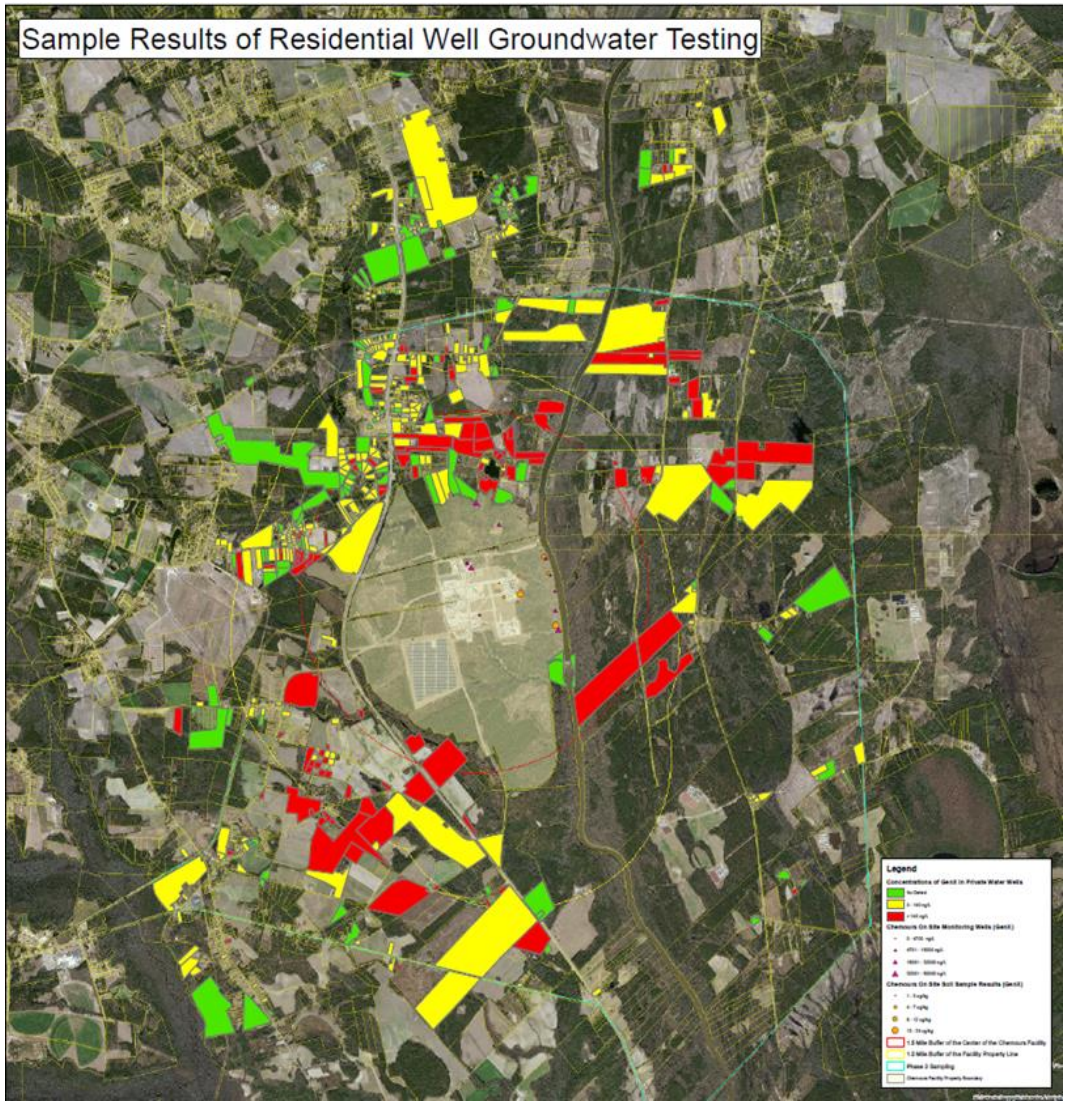

Legend
GenX Sampling Locations
0 ng/L - 1,800 ng/L
1,801 ng/L - 12,500 ng/L
12,501 ng/L - 22,900 ng/L
22,901 ng/L - 37,000 ng/L
37,001 ng/L - 61,300 ng/L
Chemours Facility Property
SMW-10
GenX not detectd
SMW-11
GenX 4,770 ng/L
INSITU-1
GenX 519 ng/L
SMW-12
GenX 1,800 ng/L
SMW-09
GenX 22,900 ng/L
LTW-01
GenX 37,000 ng/L
PFOA 96.2 ng/L
PFOS+PFOA 126 ng/L
SMW-05P
GenX 21,700 ng/L
PFOA 3,060 ng/L
PFOS+PFOA 3,060 ng/L
SMW-06
GenX 39,500 ng/L
PFOA 3,290 ng/L
PFOS+PFOA 3,290 ng/L
LTW-02
GenX 11,800 ng/L
LTW-03
GenX 12,500 ng/L
MW-1S
GenX 12,900 ng/L
PFOA 101 ng/L
PFOS+PFOA 112 ng/L
LTW-04
GenX 24,500 ng/L
LTW-05
GenX 61,300 ng/L
SMW-01
GenX 2,620 ng/L

Well Testing

- Based on the results from on-site wells.
- DEQ:
- Held an information session at St Pauls Middle School, Sept. 14. Shared test results and announced private well sampling.
- Began sampling private homeowner wells Sept. 15. First round of sampling is from adjacent properties only, analysis for Gen X, PFOS, PFOA.

- Chemours:
- Began sampling private wells the week of Sept. 11, <1 mile from site
- Offering free bottled water < 1 mile.
- Offering to sample private wells up to 1.5 miles away upon request

Division of Waste Management

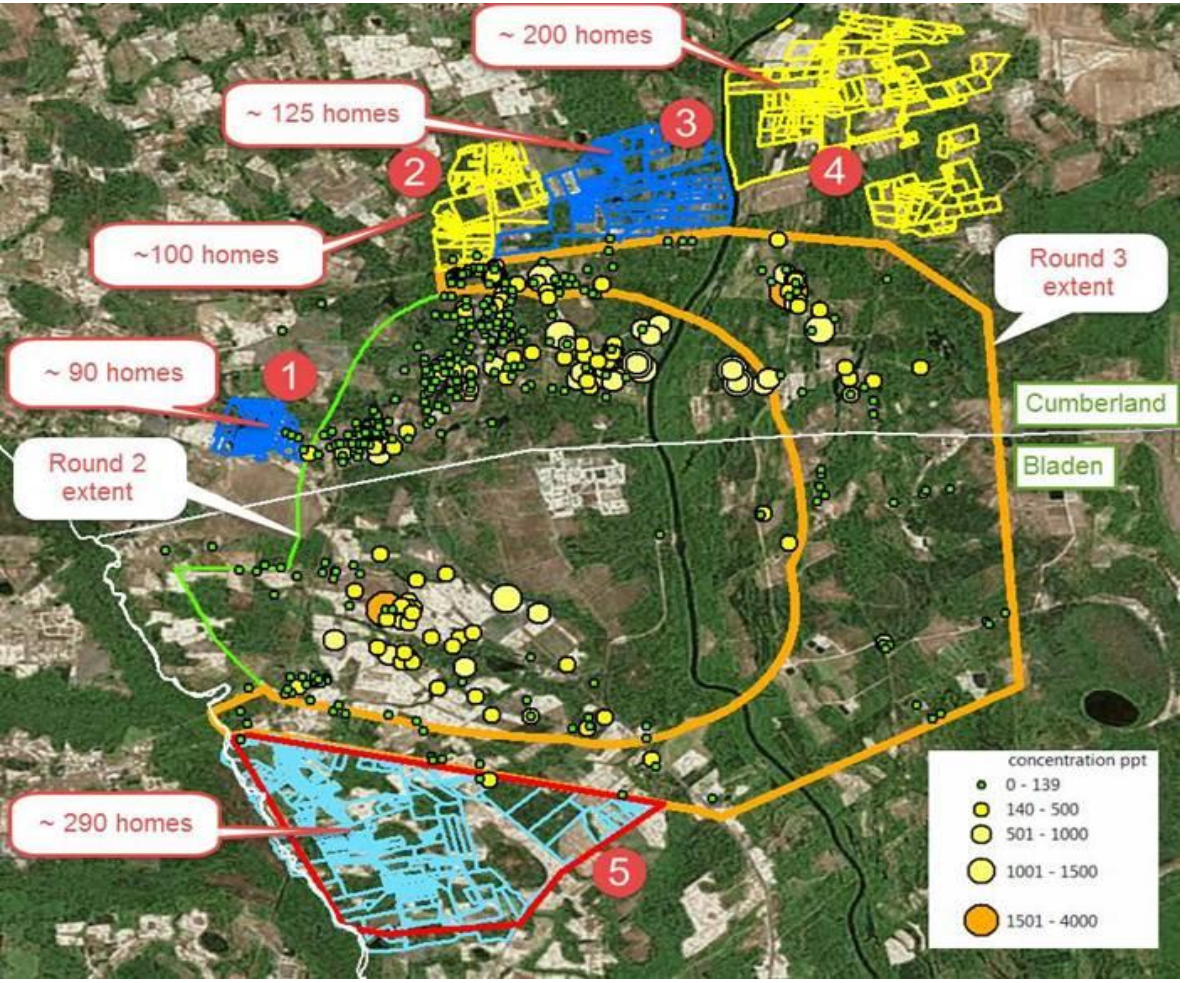


Well Sampling Results
in the Chemours area,
Approximate distances from facility boundary:
Northeast – 5.5 miles
West – 1.8 miles
Southwest – 3.9 miles
East – 2.6 miles

GenX: NC health goal = 140 ng/L

Red ≥140 ng/L
Yellow= 0 - 140 ng/L
Green = Non detect

Division of Waste Management

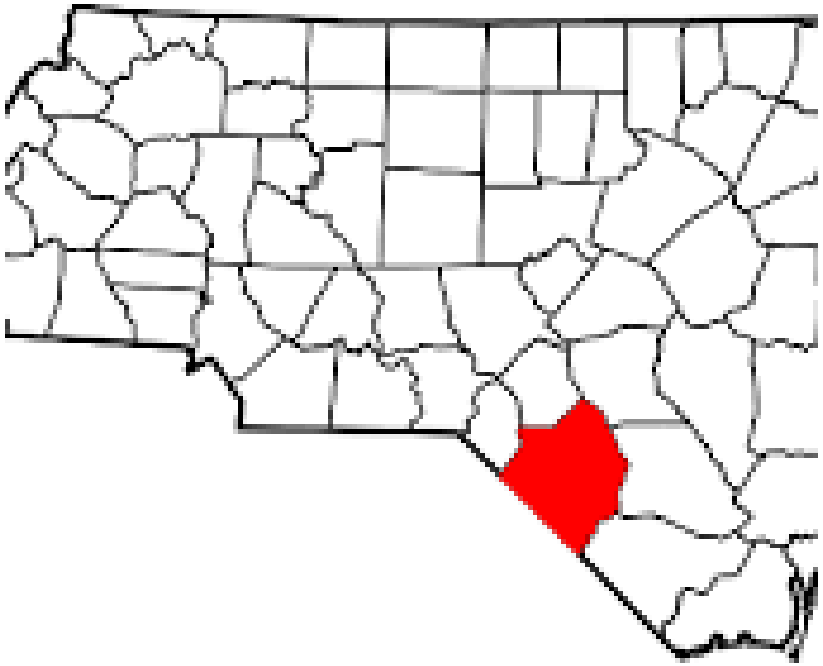


Chemours proposed "Phase 4" sampling plan

Starts with areas in red and yellow (2, 4 and 5)

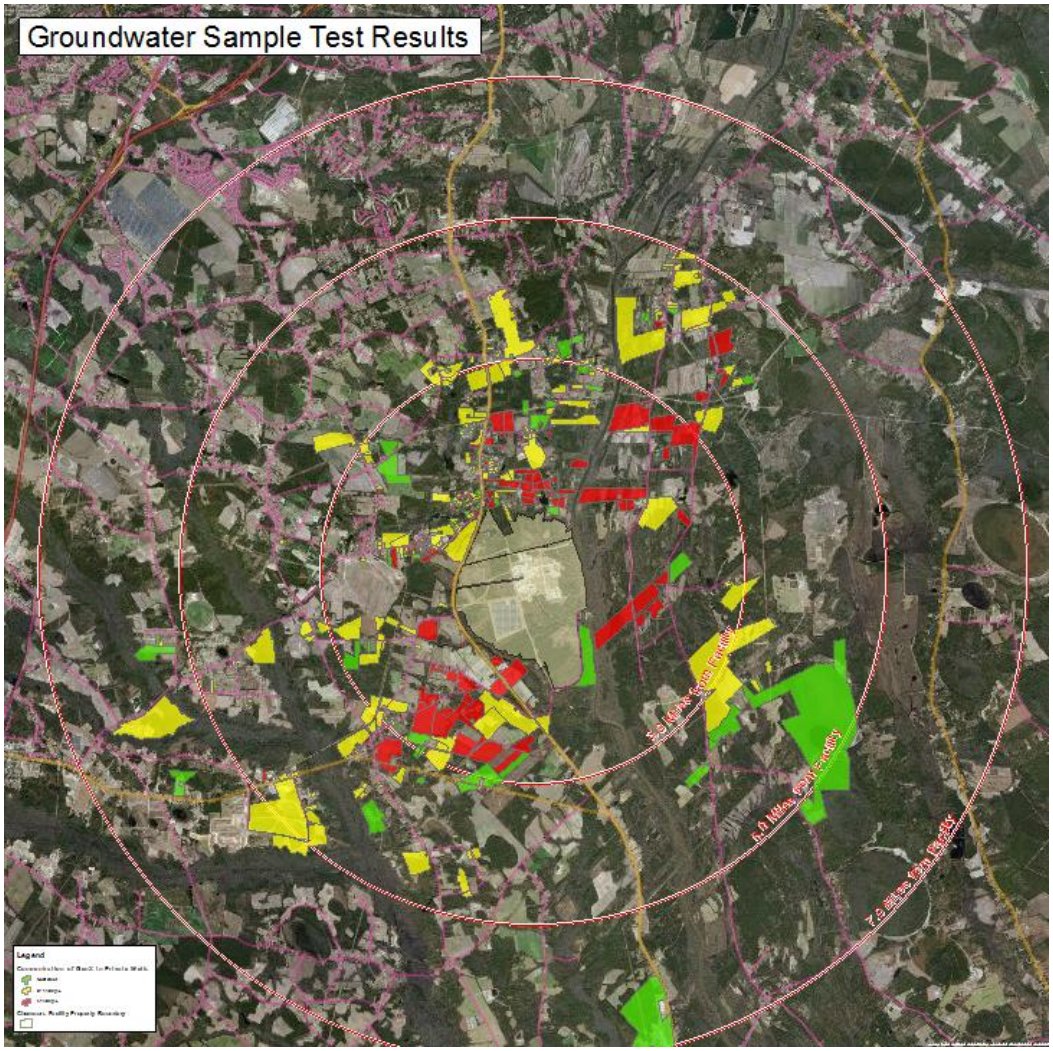
Will move on to blue areas depending on results

Robeson County Private Well Testing



- Robeson County tested 35 drinking water wells. 33 were from residences and 2 were from county-run facilities.
- Sample dates: 1/29/18, 2/13/18 and 3/26/2018
- Results:
  - 1 residence well was reported at 232 ng/L GenX, exceeding the Provisional Health Goal of 140 ng/L.
  - 33 wells had GenX detections, 2 were ND
  - 28 wells had PFOS detections, 26 had PFOA detections, 5 wells were ND for both, and the highest combined detection was 33 ng/L
  - 0 wells exceeded the health goal for PFOS + PFOA (70 ng/L)
  - 3 wells were ND for all three PFAS

Division of Waste Management



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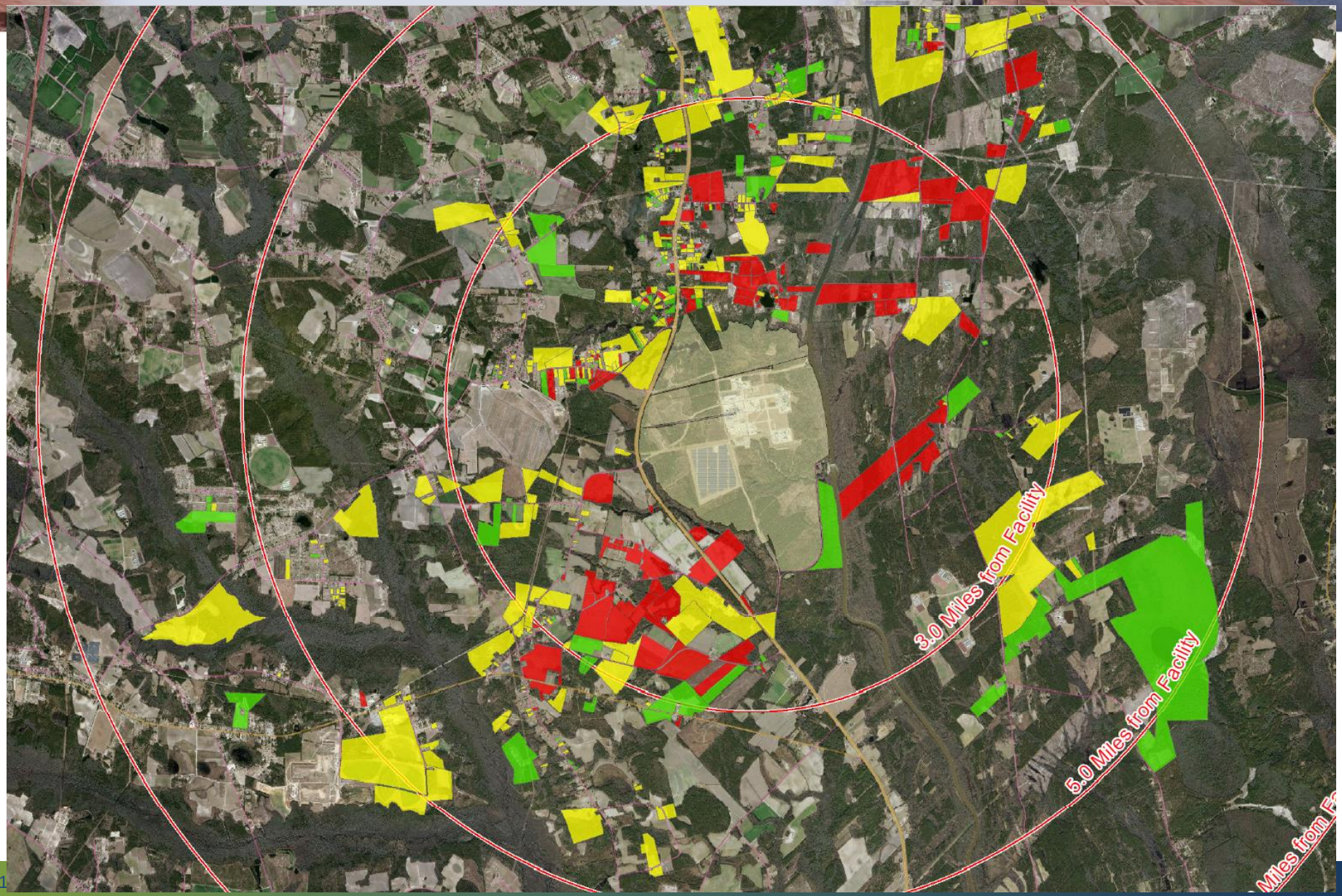
Division of Waste Management



Division of Waste Management

Combined Phase I, II, III , IV (partial) Private Well PFAS Data, also Includes Robeson Co. and DEQ-collected Data

Private Well Water GenX Summary	Combined Well Data
Distance from Chemours' border	Up to 5.5 miles
Well Collection Dates	9/6/2017 – 3/26/2018
Number of Wells tested	837
Number of Exceedances of the GenX Provisional Health Goal	207
Number of Not-Detected ("ND") GenX Analyses	178
Number of GenX Detections Less than the Health Goal [a]	450
Maximum Detected GenX Concentration	4000 ng/L

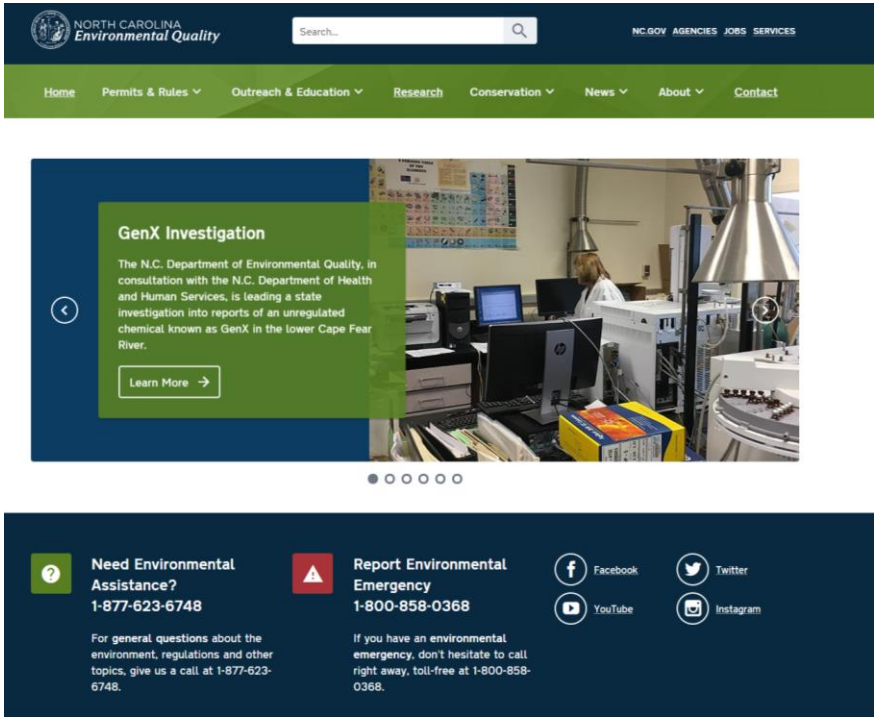
a. The NC DHHS Provisional Drinking Water Health Goal for GenX is 140 ng/L (July 2017)

Public Information

GenX and PFAS information

- DEQ has held four information sessions in the area around the facility since September, 2018
- Next public information session is planned for the first full week of May, 2018
- DEQ GenX webpage includes sampling results, sampling maps, press releases, etc.:

https://deq.nc.gov



Alternate Water Update

- Bottle water is currently being provided to Bladen and Cumberland County residents who have GenX above the state's provisional drinking water health goal of 140 parts per trillion.
- Chemours delivers a letter to each residence that has an exceedance with 5 cases of water.
- DEQ reviews lab data and sends a health risk evaluation letter to each well owner noting appropriate uses of the water.
- Each residence is then set up with Cyrstal Springs who provides water dispensers.
- Bottle water is also available at the Chemours plant after an exceedance is detected.
- Chemours has met with local governments about water lines as a long term solution

Granular Activated Carbon (GAC) Point of Use Filtration Systems

- Chemours submitted to DEQ a proposal to install granular activated carbon filtration systems for residences with Gen X present in the well at or above 140 ppt.
- DEQ provided initial feedback to Chemours and requested pilot testing of filter systems on six selected wells in the area.
- The final system was installed on April 20. Both DEQ and Chemours have sampled some of the filter units. We are currently waiting for the results.
- Sampling data regarding the effectiveness of the systems will be shared online.

Chemours testing of a residential point of use (POU) water treatment system

- Chemours Employee POU water treatment system
- DEQ-collected 12/20/17, analyzed for expanded PFAS suite
  - A high concentration of GenX (845 ng/L) was present in the pre-filter sample that was not detected in the carbon-treated samples
  - The “post-filter, no purge” sample simulates Chemours’ sample collection practice; DEQ purges the water lines prior to sample collection
  - 16 PFAS were detected in the pre-filter sample, 1 PFAS was detected in the post-filter sample (1.08 J ng/L GenX)
  - Data summary -
    - Pre-filter: 845 ng/L GenX; 15.5 (PFOS + PFOA); 1491 ng/L Total PFAS
    - Mid-filter: 1.36 J ng/L GenX; ND (PFOS + PFOA); 1.58 ng/L Total PFAS
    - Post-filter: 1.08 ng/L GenX; 1.08 (PFOS + PFOA); 1.08 ng/L Total PFAS
    - Post-Filter, No Purge – all ND

J = estimated concentration, greater than the detection limit and less than the reporting (quantitation) limit

Additional DEQ Sampling

- Two Cumberland County Elementary school wells were sampled. (Gen x levels of 5 ppt and Non detect)
- Surface water samples were collected at Camp Dixie in Bladen County and Marshwood Lake In Cumberland County. (Gen x levels of 620 and 915 ppt)
- DEQ has worked collaboratively with DHHS to address use of recreational areas.
- DEQ has also sampled an athletic field in Cumberland County that used well water onsite.

Fish Tissue Testing

Marshwood Lake Testing by DEQ

- DEQ sampled Marshwood Lake on March 14:
  - 2 surface water sample locations
  - 2 composite sediment sample locations
  - 2 Largemouth Bass fillet tissue composites
  - 1 Redear Sunfish fillet tissue composite
- Catfish will be collected in the near future

- A drinking water well onsite at the lake was sampled
- A composite sediment sample was taken from Lock & Dam 3 in the Cape Fear River
- 2 surface water samples were collected at Camp Dixie Lake
- All samples collected will be analyzed using USEPA M537-modified for Full PFAS Suite at GEL Labs
- Surface water will also be tested for Total Organic Carbon, Dissolved Organic Carbon, pH and Total Particulates; Sediment will also be tested for Total Organic Carbon and %Lipids
- Partial data has been received and is under review

Next Steps – Private Well Water

- PWW Next Steps:
  - Continue PWW testing (“Phase IV”) farther from Chemours – see map of planned areas for next sampling set
  - Identify treatment technologies that are effective at removing all PFAS from drinking water sources and other human and ecological exposure sources
  - Continue to work with Chemours, locals govts on potential long-term solutions
- Future steps:
  - Full characterization of the PFAS contamination and exposure pathways for human and ecological receptors
  - Characterize variability of individual PFAS contaminant fate and transport characteristics
  - Gather and assess toxicity profiles for human and ecological receptors

Next Steps - Continued

- Mitigate on-site releases to environment in all media
  - Implementation of On-site investigation
    - Report due January 31, 2018
    - Review to be completed by March 15, 2018
    - Additional on-site sampling during Summer 2018
- Full delineation of soil and groundwater contamination, off-site
  - Implement Off-site soil and groundwater investigation 2018/2019
  - Install off-site soil borings and monitoring wells
  - Analyze and map results

Next Steps - Continued

Remediate and/or control soil and groundwater contamination found off-site to protect human health and the environment

- Corrective Measures Study
- Select Remedial Options
- Implement Long-Term Remedies

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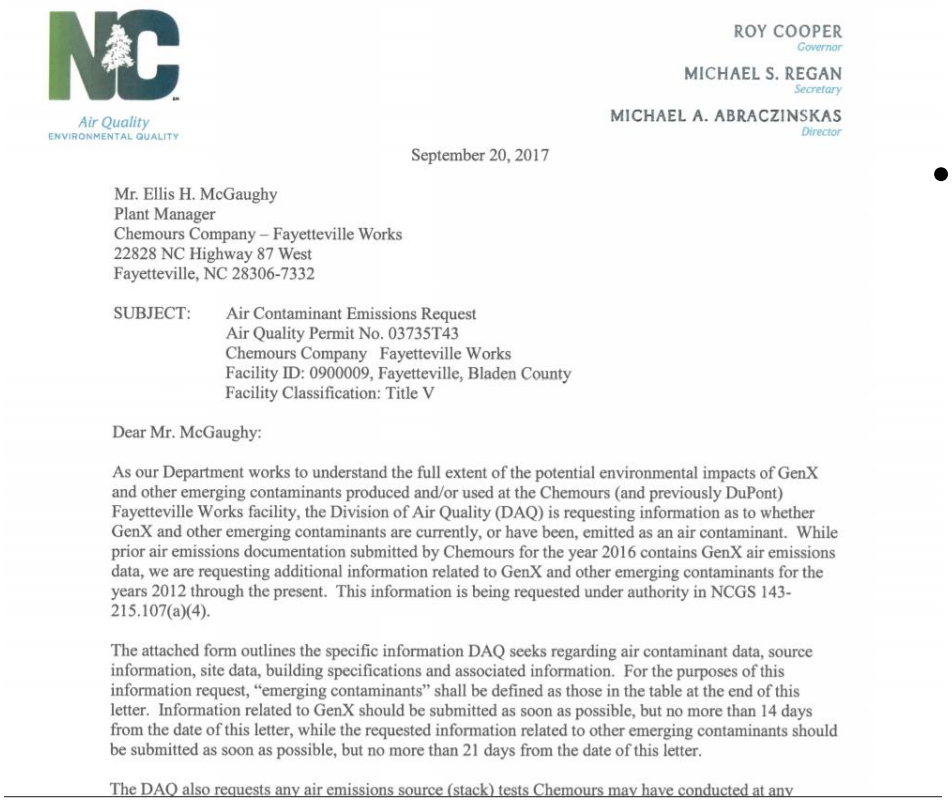
Division of Air Quality

Chemours reported air emissions (pounds per year)

	2012	2013	2014	2015	2016
C3 dimer acid fluoride	500	539	545	669	591
C3 dimer acid (GenX)	1	3	4	3	3
C3 dimer acid ammonium salt	1	3	3	2	2

- **All data based on chemical process computational model**



Air Quality
ENVIRONMENTAL QUALITY

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL A. ABRACZINSKAS
Director

September 20, 2017

Mr. Ellis H. McGaughy
Plant Manager
Chemours Company – Fayetteville Works
22828 NC Highway 87 West
Fayetteville, NC 28306-7332

SUBJECT: Air Contaminant Emissions Request
Air Quality Permit No. 03735T43
Chemours Company Fayetteville Works
Facility ID: 0900009, Fayetteville, Bladen County
Facility Classification: Title V

Dear Mr. McGaughy:

As our Department works to understand the full extent of the potential environmental impacts of GenX and other emerging contaminants produced and/or used at the Chemours (and previously DuPont) Fayetteville Works facility, the Division of Air Quality (DAQ) is requesting information as to whether GenX and other emerging contaminants are currently, or have been, emitted as an air contaminant. While prior air emissions documentation submitted by Chemours for the year 2016 contains GenX air emissions data, we are requesting additional information related to GenX and other emerging contaminants for the years 2012 through the present. This information is being requested under authority in NCGS 143-215.107(a)(4).

The attached form outlines the specific information DAQ seeks regarding air contaminant data, source information, site data, building specifications and associated information. For the purposes of this information request, "emerging contaminants" shall be defined as those in the table at the end of this letter. Information related to GenX should be submitted as soon as possible, but no more than 14 days from the date of this letter, while the requested information related to other emerging contaminants should be submitted as soon as possible, but no more than 21 days from the date of this letter.

The DAQ also requests any air emissions source (stack) tests Chemours may have conducted at any

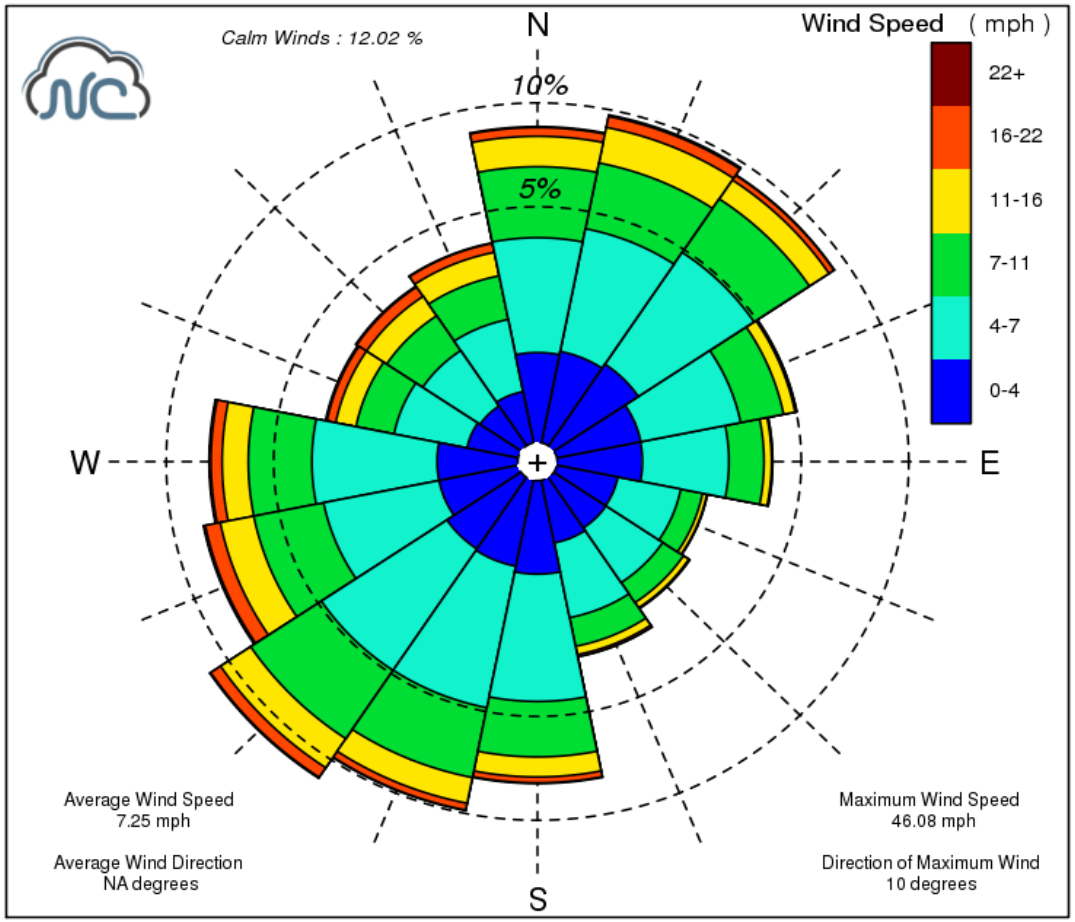
- Sep 20 - DEQ requested air emissions data from Chemours

Air Dispersion Modeling

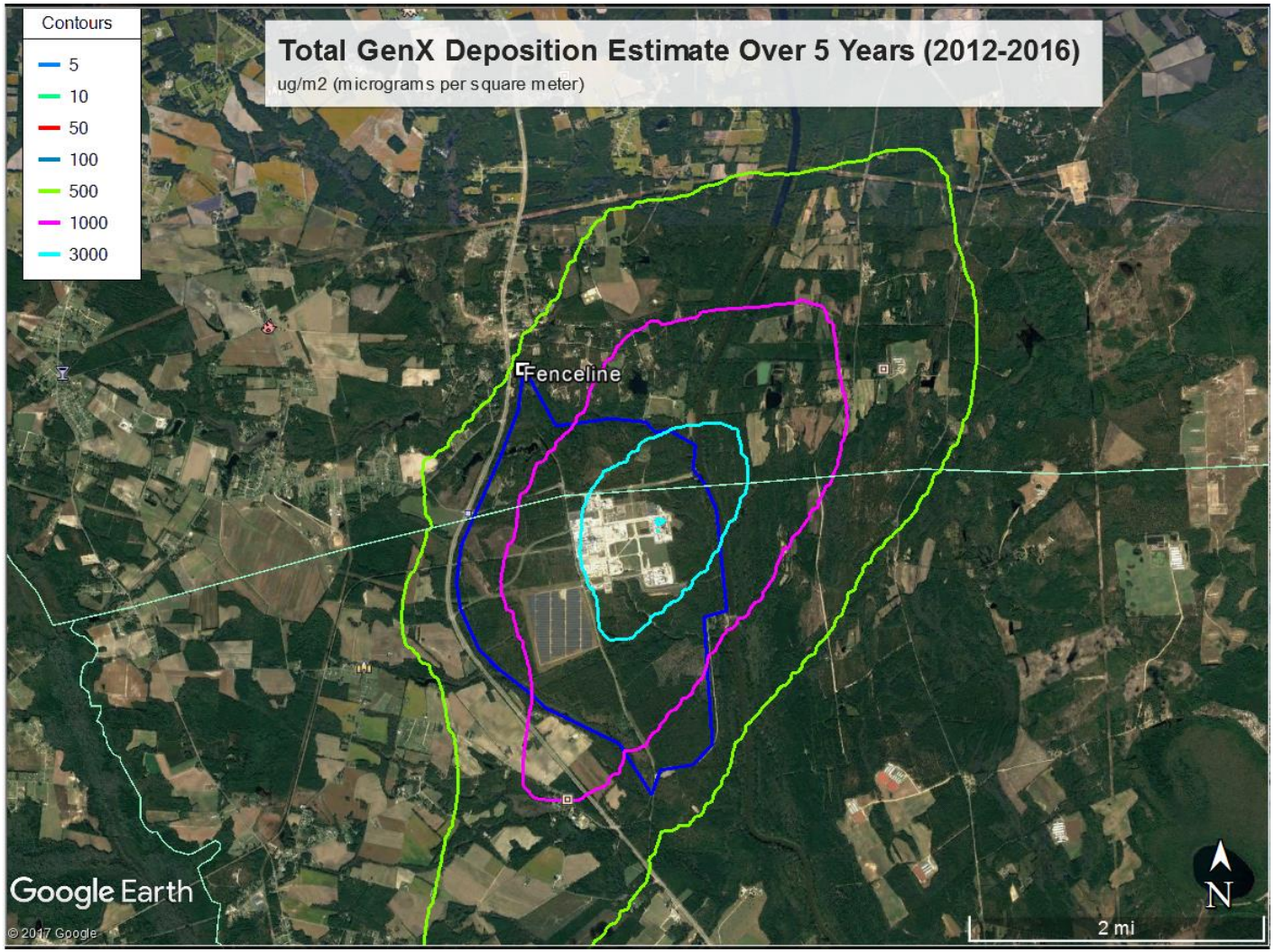
- Chemours reported emissions for 2012-2016
  - GenX compounds only
- Actual stack characteristics
- Hourly meteorology over the 5-year period

Division of Air Quality

Wind Rose for Fayetteville Airport (KFAY)
Jan. 10, 1998 to Sep. 29, 2017



Division of Air Quality



Division of Air Quality

Air Emissions Testing or “Stack Testing”

Capture and quantification of specific pollutants being emitted to the atmosphere from a process through the stack.

Chemours has submitted a protocol to define which sources they will test, which test method they will use and which contaminant they will target for quantification.

Division of Air Quality

Air Emissions Testing or “Stack Testing”

- Target contaminant – C_3 Dimer Acid (GenX)

- Sources to be tested:
  - Fluoromonomers, Nafion, and Polymer Processing Aid (PPA) processes
  - Test Locations - Division, VE South Scrubber and PPA stacks

- Shake-down testing – January 9 & 12
- Full scale testing – week of January 22 & beyond
  - Split samples for independent assessment by EPA lab
- Results expected late February/early March

Emerging Compounds

DAQ's investigation involving GenX and other PFAS from Chemours

- **GenX emissions data**
  - Started with only estimates
  - Required stack tests
  - Method development
  - First of its kind measurements

Chemours 2016 emissions estimates as originally reported to DAQ	Chemours revised 2016 emissions estimates as of October 2017	Latest emissions estimates, including information from January 2018 stack test measurements
66.6 lb/yr	594 lb/yr	2758 lb/yr

Department of Environmental Quality

Division of Air Quality

Ambient Air Quality Monitoring

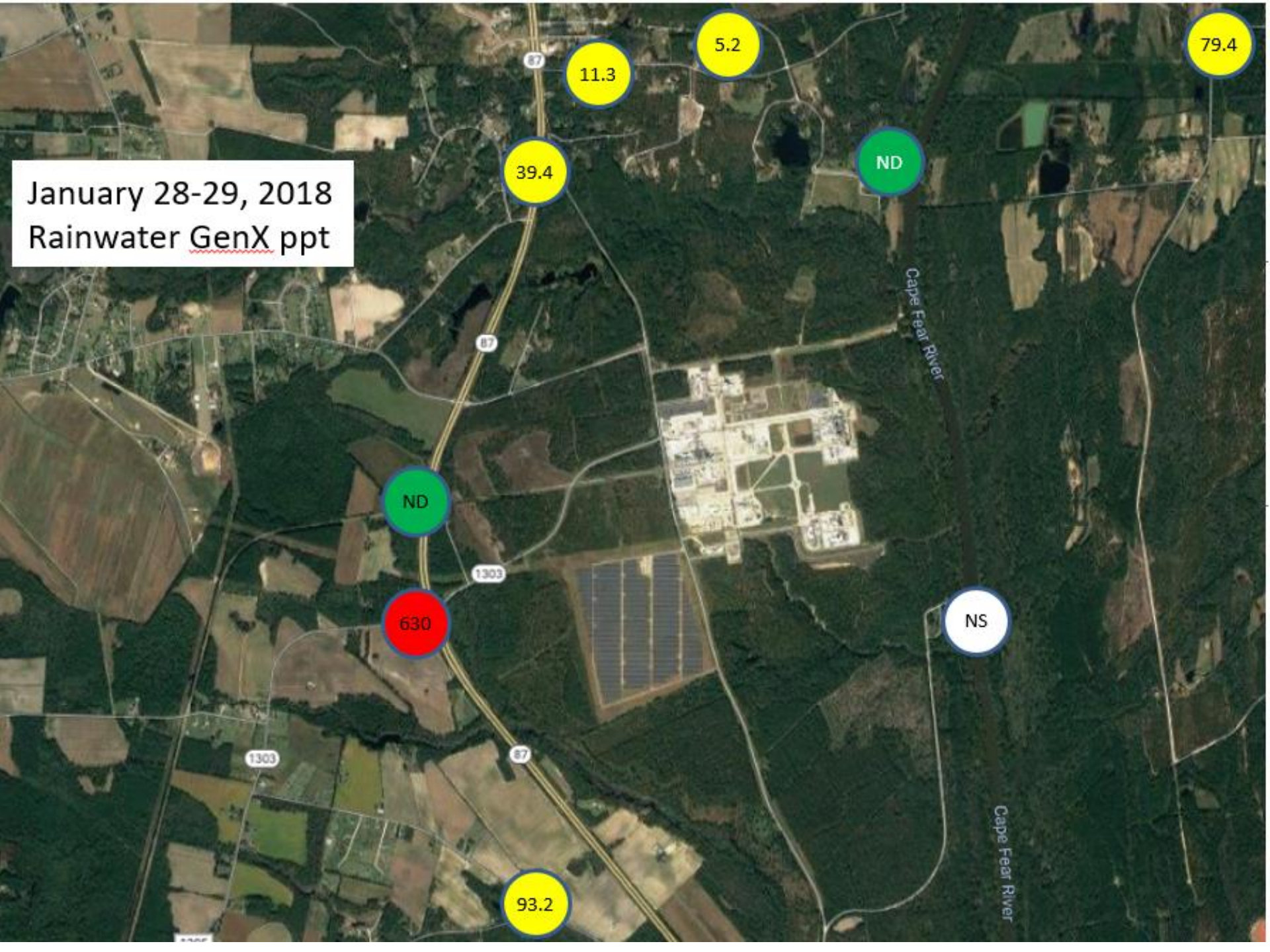
- Network of wet deposition monitors planned
- Goal: Quantify near-field deposition rates and confirm cause/effect relationships. Quantify “background” amounts of PFAS in rainwater.
  - Source-oriented sites near Chemours
    - 2 northeast of facility
    - 2 southwest of facility
  - Background sites
    - Asheville
    - Raleigh
    - Candor
    - Wilmington

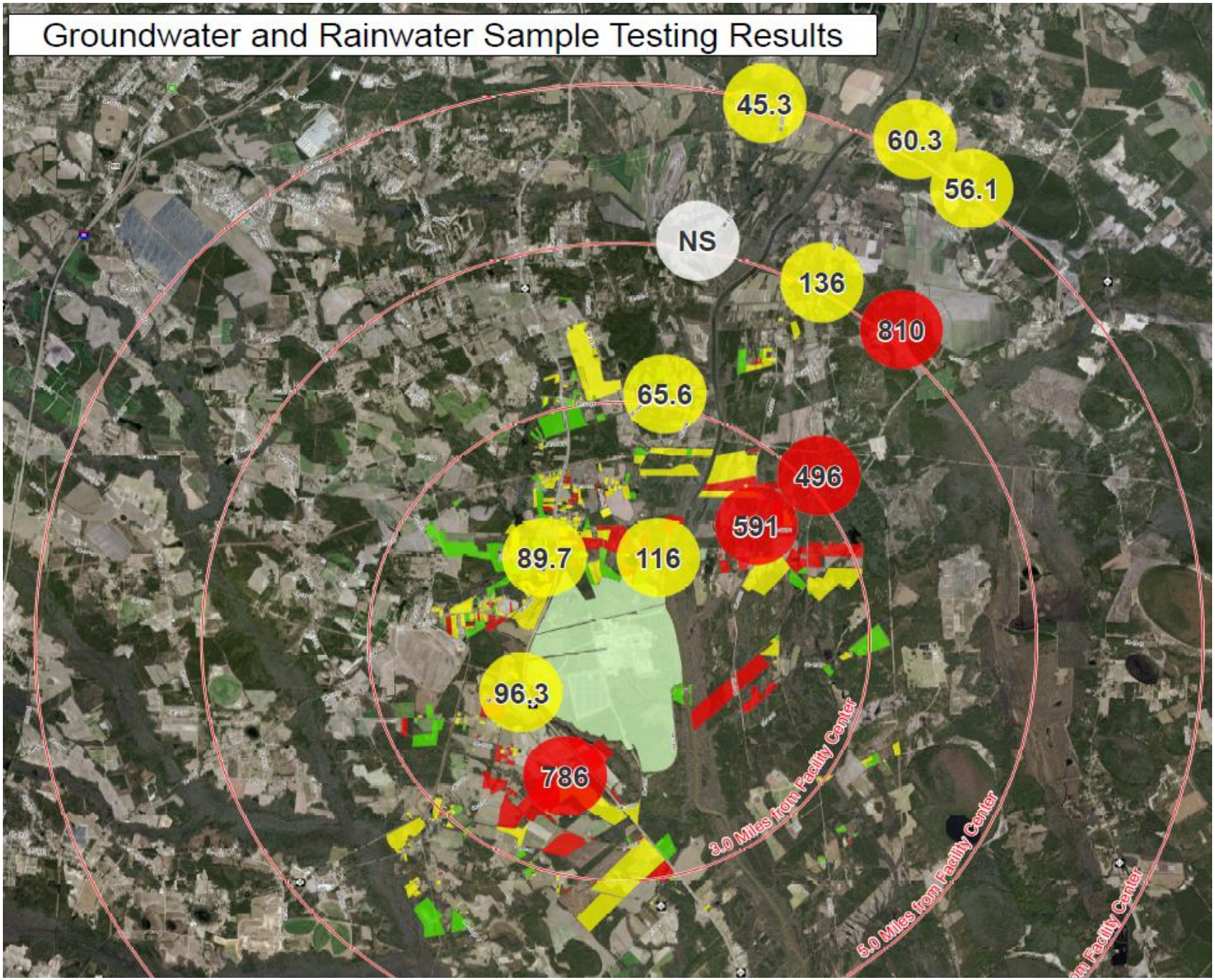
Emerging Compounds

DAQ's investigation involving GenX and other PFAS from Chemours

- **GenX ambient air quality data**
  - **Methods?**
  - **Wet deposition data - first of its kind**

Department of Environmental Quality


January 28-29, 2018
Rainwater GenX ppt
11.3
5.2
79.4
39.4
ND
ND
630
NS
93.2
87
1303
Cape Fear River
Cape Fear River


Groundwater and Rainwater Sample Testing Results
45.3
60.3
56.1
NS
136
810
65.6
496
591
89.7
116
96.3
786
3.0 Miles from Facility Center
5.0 Miles from Facility Center

Division of Air Quality

What control techniques will eliminate or significantly reduce the air emissions of interest?

- Exploring all options.
- Studying technologies, gathering available test data.

- Understanding secondary impacts of adding air pollution controls to reduce PFAS.
  - Solid waste generated?
  - Waste water generated?
  - Secondary air pollutants generated

Emerging Compounds

DAQ's investigation involving GenX and other PFAS from Chemours

- **Health impacts – what are the inhalation risks?**
  - **SAB**

- **Controls – what's technically feasible?**
  - **Carbon Adsorber trial approved**
  - **Thermal Oxidizer**

Emerging Compounds

DAQ's investigation involving GenX and other PFAS from Chemours

Summary of facts:

- **The measured air emissions of GenX compounds are significantly higher than previously understood and reported.**
- **The GenX compounds are deposited on the land by rainfall at distances of at least 7 miles from Chemours.**
- **The evidence of atmospheric deposition of GenX shows a geographic footprint that is similar to the detection of GenX in groundwater samples.**

Emerging Compounds

GenX - Recent Actions

April 6, 2018:

- **60 day notice of intent to modify Chemours' air permit:**
  - **Requires demonstration that emissions of GenX compounds do not or will not cause or contribute to violations of groundwater rules.**

The science and data collected to date informed this action.

Emerging Compounds

GenX - Recent Actions

April 9, 2018:

- **Amended complaint and motion for preliminary injunctive relief.**
- **Addresses the air emissions contributions to the groundwater violations.**

Nothing Compares
NORTH CAROLINA

SAB and other PFAS site

Description of the Science Advisory Board (SAB) and its work

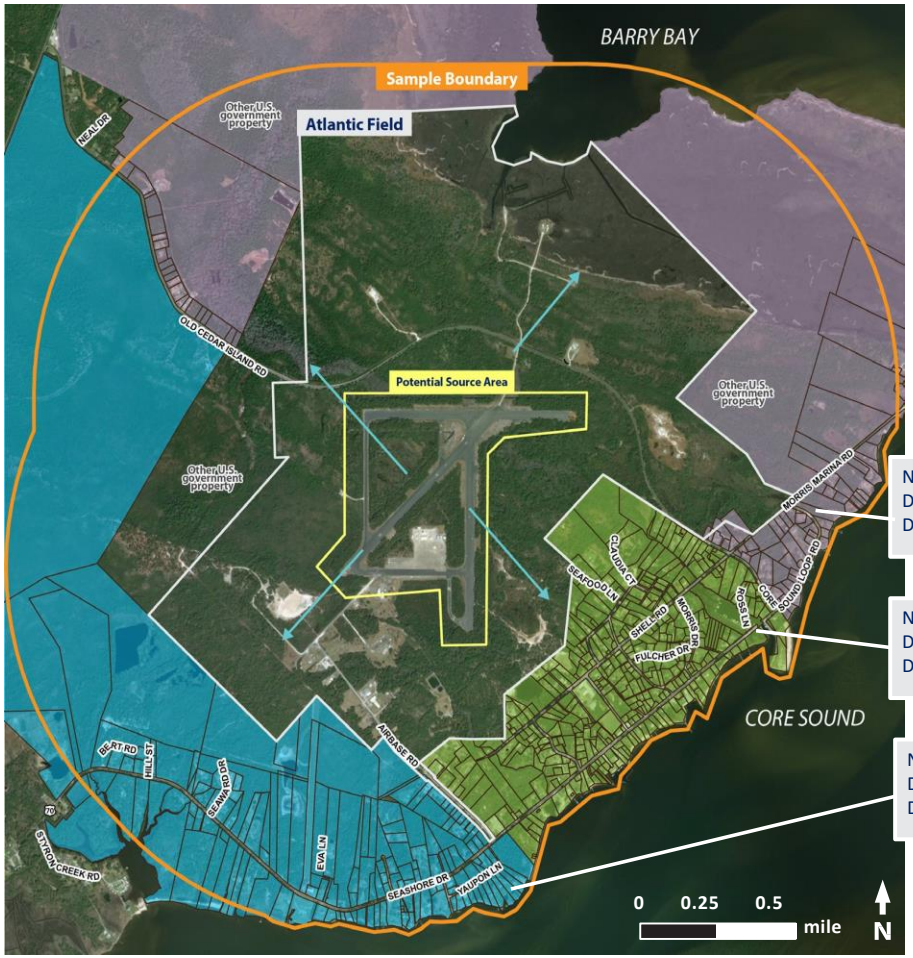
The board of 16 experts in toxicology, public health, ecology, engineering and related fields will study ways to better protect North Carolina's people and environment from new and emerging chemicals of concern, including GenX and hexavalent chromium.

- Under the board's new charter, the scope of its work has expanded from toxic air pollutants to a broader focus on the impact of new and emerging chemicals. Members come from academic institutions, the public and private sectors, and independent research facilities.

- Examine new and emerging chemicals and their potential impacts to human health and the environment.
    - Assisting the agencies in identifying contaminants of emerging concern and helping determine whether the contaminants should be studied further.
    - Evaluate the human health impacts of exposure to hazardous contaminants, and give input to DHHS as the agency establishes health goals for emerging contaminants.

- The board will meet at least six times each year.

Marine Corps Outlying Field (MCOLF) Atlantic



- 223 drinking water samples were collected in the sampling area during initial sampling by the Navy in Nov-Dec 2017.
- 197 samples had non-detect values.
- 26 samples had detections.
- 2 samples had detections above the EPA lifetime health advisory (LHA) of 70 parts per trillion (ppt).*

No detections – 96% (26 of 27)
Detections less than LHA – 4% (1 of 27)
Detections greater than LHA – 0% (0 of 27)

No detections – 87% (117 of 134)
Detections less than LHA – 12% (17 of 134)
Detections greater than LHA – 1% (1 of 134)

No detections – 80% (54 of 62)
Detections less than LHA – 18% (8 of 62)
Detections greater than LHA – 2% (1 of 62)

LEGEND

Parcel

Assumed Groundwater Flow Direction

*The 2 samples with detections above the EPA lifetime health advisory are included in the number of detections.

Marine Corps Outlying Field (MCOLF) Atlantic

- Navy is the lead; DEQ is acting in a supporting role to the Navy
- DEQ participated in public meetings held by the Navy in Atlantic, NC on November 8, 2017 and February 21, 2018
- DEQ is one of the primary point-of-contacts for the local community

GenX Investigation

The N.C. departments of Environmental Quality (DEQ) and Health and Human Services (DHHS) began investigating the presence of a compound known as GenX in the Cape Fear River in June. The Chemours facility in Fayetteville was identified as the company that produces the GenX chemical for industrial processes.

The state's investigation focused on protection of public health and drinking water. As part of the state's investigation, DEQ began collecting water samples from multiple sites along the Cape Fear River, with additional samples collected throughout the region. Those samples were analyzed at two separate labs: Test America in Colorado and the Environmental Protection Agency's lab in the Research Triangle Park.

Thanks to the state's investigation, the release to the Cape Fear River of GenX and two other fluorinated compounds has stopped, water quality for these compounds at all finished drinking water sites is well within state health goals, and the state is developing better information needed to protect North Carolina's water quality and public health.

Timeline: Past to Present

Frequently Asked Questions

News Releases

Chemours Permit Information

DEQ Presentations to House Select Committee on NC River Quality

Investigations and Enforcement Actions

GenX Sampling Sites

Groundwater Information

Health-Related Resources

Secretaries' Science Advisory Board

Hot Topics

Storm Season

GenX Investigation

- GenX Timeline
- Frequently Asked Questions
- GenX News Releases
- Chemours Permit Information
- Investigations and Enforcement Actions
- GenX Sampling Sites
- Health Related Resources
- Groundwater
- Secretaries' Science Advisory Board

Atlantic Coast Pipeline Project

Woodlake Dam

Air Quality Forecast

Coal Ash in NC

Questions?


Julie Woosley, Chief
Hazardous Waste Section
Division of Waste Management
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